

USI Consulting Group 95 Glastonbury Boulevard, Suite 102 Glastonbury, CT 06033-6503 www.usi.biz

Fax:

Phone: 860.633.5283 860.368.2112

May 29, 2013

Ms. Virginia Cahill Comptroller Town of Natick, MA 13 East Central Street Natick, MA 01760

RE: July 1, 2012 Actuarial Valuation of Postretirement Welfare Benefits

Dear Virginia,

Enclosed are two copies of the report covering the July 1, 2012 valuation of postretirement benefits offered to current and future retirees of the Town of Natick, MA.

The financial results of the actuarial valuation are summarized in the report. The Executive Summary highlights the results of the valuation. Additional information summarizing census information, actuarial assumptions, and the methodology for developing them, as well as a glossary of selected terms used in this study, is also included in the report.

All calculations are made in accordance with our understanding of the provisions of the Statement of Governmental Accounting Standards Board Number 45 (GASB 45).

Please call me if you have any questions.

Sincerely,

**USI CONSULTING GROUP** 

Robert W. Webb, FSA, EA, MAAA Vice President and Actuary

**Enclosures** 



### A Postretirement Welfare Benefit GASB 45 Actuarial Valuation As of July 1, 2012

For:

### **Town of Natick, MA**

Prepared by: The USI Consulting Group

May 29, 2013



May 29, 2013

Town of Natick, MA 13 East Central Street Natick, MA 01760

### RE: July 1, 2012 Actuarial Valuation of Postretirement Welfare Benefits

We enclose the report covering the actuarial valuation of the postretirement medical insurance plan for the employees of the Town of Natick, MA as of July 1, 2012. The numbers presented in this report reflect the adoption, by the Town of Natick, MA, of the Statement of Governmental Accounting Standard No. 45 (GASB 45).

The financial results of the actuarial valuation are summarized in the report. The Executive Summary highlights the results of the valuation, including the calculation of the Annual OPEB Costs for the fiscal years beginning July 1, 2012 and July 1, 2013.

Additional information summarizing census information, actuarial assumptions, and the methodology for developing them, as well as a glossary of selected terms used in this study, are also included in the report.

All calculations are made in accordance with our understanding of the provisions of the Statement of Governmental Accounting Standards Board Number 45 (GASB 45). We believe this report provides all of the information your auditor requires. We would appreciate a copy of the footnote to your financial statement related to the postretirement benefits.

Respectfully submitted,

USI Consulting Group

Robert W. Webb, FSA, EA, MAAA

Vice President and Actuary

John Sheaves

Senior Actuarial Consultant



### **TABLE OF CONTENTS**

		<u>Page</u>
I.	Executive Summary	1
II.	Census Information	9
III.	Financial Statement Disclosure	12
IV.	Actuarial Assumptions And Methodology	16
v	Annendices	21

### **Section I**

### **Executive Summary**

The section presents the results of the July 1, 2012 valuation. The first section provides a brief summary of the valuation results. The Executive Summary Detail provides a more detailed development of the expenses and liabilities. Items I through V show the development of the Annual Required Contribution (ARC). Items VI through IX show the calculation of the Annual OPEB Cost.

### **EXECUTIVE SUMMARY**

### Introduction

This report details the development of the Annual OPEB Cost for the Fiscal Year ending June 30, 2013. Estimated June 30, 2013 and June 30, 2014 disclosures are included in Section III

The liabilities developed in this report are only valid for purposes of meeting employer accounting requirements as required by Statement of Governmental Accounting Standards Number 45 (GASB 45). Liabilities developed for other purposes could be significantly different than those shown in this report.

### **Summary of Results**

The Actuarial Accrued Liability and Normal Cost are calculated as of the valuation date. The Annual OPEB Cost and Expected Benefit Payments are for the year beginning on the valuation date. Additional detail is developed in the exhibits included in this actuarial valuation report.

Fiscal Year Ending June 30, 201.	3
----------------------------------	---

Beginning of Year Net OPEB Obligation (NOO)	\$31,754,500
Actuarial Accrued Liability (AAL)	\$120,981,624
Actuarial Value of Assets	\$0
Unfunded Actuarial Accrued Liability (UAAL)	\$120,981,624
Annual Required Contribution (30 year amortization)	\$11,518,444
Annual OPEB Cost	\$11,285,316
Expected Benefit Payments	\$3,706,618

### Fiscal Year Ending June 30, 2014

Beginning of Year Net OPEB Obligation (NOO)	\$39,333,198
Actuarial Accrued Liability (AAL)	\$127,905,248
Actuarial Value of Assets	\$0
Unfunded Actuarial Accrued Liability (UAAL)	\$127,905,248
Annual Required Contribution (30 year amortization)	\$12,127,317
Annual OPEB Cost	\$11,793,312
Expected Benefit Payments	\$4,337,696

### **Economic Assumptions**

The employer, with the approval of the auditor, is responsible for selecting the economic assumptions as of the disclosure date. The following table details the selected economic assumptions for the current fiscal year:

Assumption Selection Date	July 1, 2012
Funding Interest Rate*	4.00%
2012 Medical Trend Rates	9.00%
Ultimate Medical Trend Rate	5.00%
Year Ultimate Trend Rates Reached	2016
Annual Payroll Increase	2.50%

<sup>\*</sup> Reflects current funding policy (assumes no funding).

### **EXECUTIVE SUMMARY (cont.)**

### **Experience Gains and Losses**

The plan had an accumulated experience gain over the past two years, primarily due to health care increasing less than assumed, partially offset by demographic changes different than assumed. The impact of the gain on the actuarial accrued liability is provided in Appendix II.

### Changes included in current valuation

The plan assumptions that were changed include the mortality, medical trend rates, and participation rates. These assumptions are summarized in Section IV of the report. The impact on plan liabilities is shown in Appendix II in Section V.

The new <u>Health Care Reform Law</u> is not expected to have a significant impact on the plan costs other than the provision for a "High Cost Plan Excise Tax", which is effective in 2018. This provision of the law is described in more detail in Section IV. The impact on plan liabilities is shown in Appendix II in Section V.

### **Accounting for Postretirement Benefits**

Government Accounting Standard No. 45 (GAS 45) addresses the accounting and financial reporting requirements by Employers for Postemployment Benefits Other than Pensions (OPEB). Employers that are required to follow Government Accounting Standards are subject to this standard. The statement does not require that the benefits be pre-funded, however, it defines a financial framework for assessing the costs, design, and sustainability of OPEBs offered by employers.

This report presents the annual expense required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of Governmental Accounting Standards Board Statement No. 45. This report also provides the information needed to prepare the footnote in your financial statements related to your postretirement benefit plans.

The Annual Required Contribution (ARC) and Annual OPEB Cost are developed in the Executive Summary Detail included in this section. Section III presents the disclosure information, including the development of the Net OPEB obligation based on expected contributions / benefits to be paid during the fiscal year.

### **Actuarial Certification**

The financial results of the actuarial valuation are summarized in this report. The valuation has been prepared as of July 1, 2012. The detail charts included in this Executive Summary highlight the results of the valuation. Additional information summarizing the census, actuarial assumptions, plan provisions, and a glossary of selected terms used in this study are also included in this report.

The valuation is based on the November 1, 2012 census data and July 1, 2012 plan information as provided by the employer. We have reviewed both the census and financial data for reasonableness, but have not completed an independent audit of the information.

All costs, liabilities, and other factors under the plan were determined in accordance with generally accepted actuarial principles and procedures. The calculations are consistent and undertaken with our understanding of Statement of Governmental Accounting Standards Number 45 (GAS 45). In our opinion, the actuarial assumptions are reasonable, taking in account the experience of the plan and reasonable expectations and, individually represent our best estimate of the anticipated experience under the plan.

### **EXECUTIVE SUMMARY (cont.)**

### Actuarial Certification (cont.)

I have no relationship with the employer or the plan that would objectively impair, or appear to impair, my ability to perform the work detailed in this report.

I certify that I am a member of the American Academy of Actuaries and meet its Qualification Standards to provide

an actuarial opinion in accordance with GASB 45.

Robert W. Webb, FSA, EA, MAAA

Vice President and Actuary

Adeniyi Olaiya, ASA, MAAA

Associate Vice President and Actuary

### EXECUTIVE SUMMARY DETAIL GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST FOR 2012 BY BENEFIT

		<u>Medical</u>	<u>Life</u>	<u>Total</u>
I.	Present value of Future benefits			
	A. Retirees/Disableds	\$61,096,769	\$878,808	\$61,975,577
	B. Active Employees	\$122,676,592	<u>\$638,283</u>	\$123,314,875
	C. Total	\$183,773,361	\$1,517,091	\$185,290,452
II.	Actuarial Accrued Liability			
	A. Retirees/Disableds	\$61,096,769	\$878,808	\$61,975,577
	B. Active Employees	<u>\$58,619,880</u>	<u>\$386,167</u>	\$59,006,047
	C. Total	\$119,716,649	\$1,264,975	\$120,981,624
III.	Actuarial Assets	\$0	\$0	\$0
IV.	Unfunded Actuarial Accrued Liability (UAAL)	\$119,716,649	\$1,264,975	\$120,981,624
V.	Annual Required Contribution (ARC)			
	A. Normal Cost	\$5,609,879	\$29,651	\$5,639,530
	B. Supplemental Cost	\$5,447,692	\$59,485	\$5,507,177
	C. Compound Interest to Year End	<u>\$369,251</u>	<u>\$2,486</u>	<u>\$371,737</u>
	D. Annual Required Contribution [A. + B. + C.]	\$11,426,822	\$91,622	\$11,518,444
VI.	Net OPEB Obligation	\$31,620,420	\$134,080	\$31,754,500
VII.	Interest on net OPEB Obligation	\$1,264,817	\$5,363	\$1,270,180
VIII.	Adjustment to ARC	(\$1,496,960)	(\$6,348)	(\$1,503,308)
IX.	Annual OPEB Cost (Expense)	\$11,194,679	\$90,637	\$11,285,316
	[V.D. + VII. + VIII.]			
X.	Expected Benefit Payments			
	A. Retirees/Disableds	\$3,490,013	\$53,965	\$3,543,978
	B. Active Employees	<u>\$162,640</u>	<u>\$0</u>	\$162,640
	C. Total	\$3,652,653	\$53,965	\$3,706,618

## EXECUTIVE SUMMARY DETAIL

# GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION

# AND ANNUAL OPEB COST FOR 2012 BY GROUP

•	Precent value of Enture hanefite	Government	Safety	Education	Works	SHH	Recreation	Library	Sewer	<u>Too</u>	Retirees	Total
•		80	80	0\$	80	80	80	80	80	80	\$61,975,577	\$61,975,577
	B. Active Employees	\$5,904,343	\$27,536,095	\$77,153,454	\$4,790,084	\$566,118	\$1,319,449	\$2,607,991	\$2,562,358	\$189,231	\$685,752	\$123,314,875
	C. Total	\$5,904,343	\$27,536,095	\$77,153,454	\$4,790,084	\$566,118	\$1,319,449	\$2,607,991	\$2,562,358	\$189,231	\$62,661,329	\$185,290,452
11.	Actu											
		0\$	\$0	\$0	80	80	\$0	80	80	80	\$61,975,577	\$61,975,577
	<ul><li>B. Active Employees</li><li>C. Total</li></ul>	\$3,076,447	\$15,727,639 \$15,727,639	\$32,658,967 \$32,658,967	\$2,661,533 \$2,661,533	\$329,420 \$329,420	\$795,400 \$795,400	\$1,731,587	\$1,513,674	\$90,851	\$420,529	\$59,006,047
III.	Actuarial Assets	\$0	\$0	80	\$0	80	80	80	0\$	\$0	8	0\$
17.	Unfunded Actuarial Accrued Liability (UAAL)	\$3,076,447	\$15,727,639	\$32,658,967	\$2,661,533	\$329,420	\$795,400	\$1,731,587	\$1,513,674	\$90,851	\$62,396,106	\$120,981,624
7.	Annual Required Contribution (ARC) A. Normal Cost	\$329,418	\$1,127,728	\$3.719.592	\$167.819	\$28.207	\$55.183	\$106613	606 628	608.63	615 869	059 639 530
	B. Supplemental Cost C. Compound Interest to Year End	\$139,203	\$718,072	\$1,492,814	\$124,360	\$15,723	\$36,992	\$78,832	\$71,205	\$4,112	\$2,825,864	\$5,507,177
		\$487,178	\$1,918,784	\$5,418,978	\$303,784	\$45,674	\$95,802	\$192,741	\$156,509	\$14,471	\$2,884,523	\$11,518,444
7.7	Net OPEB Obligation	\$1.765.343	\$7 336 477	822 182 719	\$1365126	8328 504	\$365 133	026 8983	\$773 707	376 003	(007 070 64)	931 764 500
			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		7	10,070	CO., 100	007,0004	267,6710	C17'00¢	(\$9,500,009)	\$51,754,500
7.11.	Interest on net OPEB Obligation	\$70,614	\$293,459	\$887,309	\$54,605	\$13,144	\$14,605	\$34,729	\$28,932	\$3,531	(\$130,748)	\$1,270,180
VIII.	Adjustment to ARC	(\$83,574)	(\$347,321)	(\$1,050,165)	(\$64,627)	(\$15,556)	(\$17,286)	(\$41,103)	(\$34,242)	(\$4,179)	\$154,745	(\$1,503,308)
IX	Annual OPEB Cost (Expense) [V.D. + VII. + VIII.]	\$474,218	\$1,864,922	\$5,256,122	\$293,762	\$43,262	\$93,121	\$186,367	\$151,199	\$13,823	\$2,908,520	\$11,285,316
×	Expected Benefit Payments											
		\$0	80	80	\$0	80	\$0	80	80	80	\$3,543,978	\$3,543,978
		\$9,409	\$42,378	\$96,195	\$4,103	\$660	\$3,023	\$6,094	\$778	\$0	<u>\$0</u>	\$162,640
	C. Total	\$9,409	\$42,378	\$96,195	\$4,103	099\$	\$3,023	\$6,094	\$778	80	\$3,543,978	\$3,706,618

### EXECUTIVE SUMMARY DETAIL GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION AND ANNUAL OPEB COST FOR 2013 BY BENEFIT

		<u>Medical</u>	<u>Life</u>	<u>Total</u>
I.	Present value of Future benefits			
	A. Retirees/Disableds	\$62,157,095	\$882,580	\$63,039,675
	B. Active Employees	<u>\$140,647,448</u>	<u>\$649,134</u>	\$141,296,582
	C. Total	\$202,804,543	\$1,531,714	\$204,336,257
II.	Actuarial Accrued Liability			
	A. Retirees/Disableds	\$62,157,095	\$882,580	\$63,039,675
	B. Active Employees	<u>\$64,456,786</u>	<u>\$408,787</u>	\$64,865,573
	C. Total	\$126,613,881	\$1,291,367	\$127,905,248
III.	Actuarial Assets	\$0	\$0	\$0
IV.	Unfunded Actuarial Accrued Liability (UAAL)	\$126,613,881	\$1,291,367	\$127,905,248
V.	Annual Required Contribution (ARC)			
	A. Normal Cost	\$5,750,125	\$30,392	\$5,780,517
	B. Supplemental Cost	\$5,901,274	\$62,509	\$5,963,783
	C. Compound Interest to Year End	<u>\$380,385</u>	<u>\$2,632</u>	\$383,017
	D. Annual Required Contribution [A. + B. + C.]	\$12,031,784	\$95,533	\$12,127,317
VI.	Net OPEB Obligation	\$39,162,446	\$170,752	\$39,333,198
VII.	Interest on net OPEB Obligation	\$1,566,498	\$6,830	\$1,573,328
VIII.	Adjustment to ARC	(\$1,899,053)	(\$8,280)	(\$1,907,333)
IX.	Annual OPEB Cost (Expense) [V.D. + VII. + VIII.]	\$11,699,229	\$94,083	\$11,793,312
Х.	Expected Benefit Payments			
	A. Retirees/Disableds	\$3,691,459	\$54,183	\$3,745,642
	B. Active Employees	\$592,053	\$34,183	
	C. Total	\$4,283,512	\$54,184	\$592,054 \$4,227,606
		Φ7,203,312	\$34,104	\$4,337,696

### EXECUTIVE SUMMARY DETAIL

# GASB 45 LIABILITIES, ANNUAL REQUIRED CONTRIBUTION

## AND ANNUAL OPEB COST FOR 2013 BY GROUP

7	Present value of Future benefits	Government	Safery	Education	Works	SHH	Recreation	Library	Sewer	J <sub>10</sub> 5	Retirees	Total
	A. Retirees/Disableds     B. Active Employees     C. Total	\$6,735,111	\$644,017	\$89,284,494	\$40,039	\$11,002	\$27,787	\$60,084	\$2,939,551	\$215,741	\$61,135,301	\$63,039,675
*		0,7,6	0+0,73+,104	000,000,000	617,000,00	7024,307	\$1,555,455	167,11,678	32,949,898	\$215,741	\$61,917,305	\$204,336,257
ä	Actuarial Accrueal Liability A. Retirees/Disableds B. Active Employees C. Total	\$89,287 \$3,443,215 \$3,532,502	\$644,017 \$16,842,339 \$17,486,356	\$1,021,811 \$36,713,771 \$37,735,582	\$40,039 \$2,898,302 \$2,938,341	\$11,002 \$360,257 \$371,259	\$27,787 \$853,736 \$881,523	\$60,084 \$1,845,428 \$1,905,512	\$10,347 \$1,645,551 \$1,655,898	\$0 \$104,679 \$104,679	\$61,135,301 \$158,295 \$61,293,596	\$63,039,675 \$64,865,573 \$127,905,248
Ш	Actuarial Assets	\$0	\$0	80	80	80	80	80	0\$	80	80	0\$
17.	Unfunded Actuarial Accrued Liability (UAAL)	\$3,532,502	\$17,486,356	\$37,735,582	\$2,938,341	\$371,259	\$881,523	\$1,905,512	\$1,655,898	\$104,679	\$61,293,596	\$127,905,248
7.	Annual Required Contribution (ARC) A. Normal Cost B. Supplemental Cost C. Compound Interest to Year End D. Annual Required Contribution [A. + B. + C.]	\$337,653 \$162,188 \$19,120 \$518,961	\$1,155,921 \$812,630 \$2,44610 \$2,043,161	\$3,812,582 \$1,747,442 \$214,557 \$5,774,581	\$172,014 \$139,704 \$12,149 \$323,867	\$28,912 \$17,954 \$1,804 \$48,670	\$56,563 \$41,705 \$3,675 \$101,943	\$109,278 \$88,423 <u>\$7,356</u> \$205,057	\$81,281 \$79,343 \$6,329 \$166,953	\$10,047 \$4,806 \$588 \$15,441	\$16,266 \$2,869,588 \$42,829 \$2,928,683	\$5,780,517 \$5,963,783 \$383,017 \$12,127,317
77.	Net OPEB Obligation	\$2,230,152	\$9,159,021	\$27,342,646	\$1,654,785	\$371,196	\$455,231	\$1,048,503	\$873,713	\$102,098	(\$3,904,147)	\$39,333,198
VII.	Interest on net OPEB Obligation	\$89,206	\$366,361	\$1,093,706	161,99\$	\$14,848	\$18,209	\$41,940	\$34,949	\$4,084	(\$156,166)	\$1,573,328
VIII.	Adjustment to ARC	(\$108,144)	(\$444,136)	(\$1,325,890)	(\$80,243)	(\$18,000)	(\$22,075)	(\$50,844)	(\$42,368)	(\$4,951)	\$189,318	(\$1,907,333)
IX	Annual OPEB Cost (Expense) [V.D. + VII. + VIII.]	\$500,023	\$1,965,386	\$5,542,397	\$309,815	\$45,518	\$98,077	\$196,153	\$159,534	\$14,574	\$2,961,835	\$11,793,312
×	Expected Benefit Payments A. Retirees/Disableds B. Active Employees C. Total	\$9,409 \$34,268 \$43,677	\$42,378 \$164.244 \$206,622	\$98,431 \$293,758 \$392,189	\$4,103 \$11,860 \$15,963	\$660 \$2,850 \$3,510	\$3,023 \$9,767 \$12,790	\$6,094 \$21,498 \$27,592	\$778 <u>\$4,011</u> \$4,789	\$0 \$286 \$286	\$3,580,766 \$49,512 \$3,630,278	\$3,745,642 \$ <u>\$\$92,054</u> \$4,337,696

### **Section II**

### **Census Information**

This section details statistics related to the participants in the postretirement benefit plan.

### **CENSUS INFORMATION – A.**

### **EMPLOYEE COUNTS**

	As of l	November 1,	2012	As	of July 1, 20	11
	<u>Actives</u>	<u>Retirees</u>	<u>Total</u>	<u>Actives</u>	Retirees	Total
Male	412	257	669	376	258	634
Female	<u>632</u>	<u>310</u>	<u>942</u>	<u>608</u>	<u>301</u>	909
Total	1,044	567	1,611	984	559	1543

### **COUNTS BY AGE AND ELIGIBILITY STATUS**

### **ACTIVE EMPLOYEES:**

Age	Currently Eligible to Retire	Not Currently Eligible to Retire	Total
29 and under	143	0	143
30 - 34	143	0	143
35 - 39	91	0	91
40 - 44	109	3	112
45 - 49	105	17	122
50 - 54	108	36	144
55 - 59	56	82	138
60 - 64	28	82	110
65 and over	15	26	41
Total	312	246	1.044

### **CURRENT RETIREES:**

Age	Retirees	Spouse	Total
54 and under	2	3	5
55 - 59	21	22	43
60 - 64	76	36	112
65 - 69	129	62	191
70 - 74	106	36	142
75 - 79	82	40	122
80 and over	151	47	198
Total	567	246	813

### **CENSUS INFORMATION – B.**

### **AVERAGE AGE AND SERVICE**

A CTIVE EVAN OVERS	As of November 1, 2012	As of July 1, 2011
ACTIVE EMPLOYEES:		
A. Average Age at Hire		
Males	32.2	32.2
Females	37.2	37.1
Total	35.2	35.2
B. Average Service		
Males	11.1	12.1
Females	9.1	9.2
Total	9.9	10.3
C. Average Current Age		
Males	43.3	44.3
Females	46.3	46.3
Total	45.1	45.5
CURRENT RETIREES		
D. Average Current Age		
Males	71.9	71.9
Females	74.2	75.2
Total	73.2	73.7

### **Section III**

### **Financial Statement Disclosure**

This section provides the required information and notes to the Financial Statements For the fiscal year ending June 30, 2013.

### FINANCIAL STATEMENT DISCLOSURE

The GASB standard on accounting for postretirement benefits other than pensions requires the following disclosures in the financial statements with regard to the retiree benefit liability:

### 1.) GASB 45 DISCLOSURE FINANCIALS – ALL DIVISIONS

A.	Annual OPEB Cost and Net OPEB Obligation	7/1/2012 - 6/30/2013	7/1/2013 - <u>6/30/2014</u>
	1. Annual Required Contribution (ARC)	\$11,518,444	\$12,127,317
	2. Interest on net OPEB Obligation	\$1,270,180	\$1,573,328
	3. Adjustment to ARC	(\$1,503,308)	(\$1,907,333)
	4. Annual OPEB Cost (Expense)	\$11,285,316	\$11,793,312
	5. Contribution made (assumed middle of year) *	(\$3,706,618)	(\$4,337.696)
	6. Increase in net OPEB Obligation	\$7,578,698	\$7,455,616
	7. Net OPEB Obligation - beginning of year	\$31,754,500	\$39,333,198
	8. Net OPEB Obligation - end of year	\$39,333,198	\$46,788,814

<sup>\*</sup> Contribution made was assumed to equal Expected Benefit Payments

The annual OPEB Cost, the percentage of annual OPEB cost contributed to the plan, and the net OPEB obligation for fiscal years ending 2013/2014 are as follows:

Fiscal Year <u>Ending</u>	Annual OPEB Cost	Percentage of Annual OPEB Cost Contributed	Net OPEB <u>Obligation</u>	Covered <u>Payroll</u>	OPEB Cost <u>% of Pay</u>
6/30/2013	\$11,285,316	32.8%	\$39,333,198	\$51,510,389	21.91%
6/30/2014	\$11,793,312	36.8%	\$46,788,814	\$52,798,149	22.34%

### B. Funded Status and Funding Progress

Actuarial Valuation <u>Date</u>	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) ( <u>b)</u>	Unfunded AAL (UAAL) <u>(b - a)</u>	Funded Ratio <u>(a/b)</u>	Covered Payroll <u>(c)</u>	UAAL as a Percentage of Covered Payroll (AAL) ((b - a) / c)
7/1/2008	\$0	\$111,743,502	\$111,743,502	0.0%	\$59,832,150	186.8%
7/1/2010	\$0	\$119,187,237	\$119,187,237	0.0%	\$60,836,610	195.9%
7/1/2012	\$0	\$120,981,624	\$120,981,624	0.0%	\$51,510,389	234.9%

### C. Methods and Assumptions

-	Interest Rate	4.00%
-	2012 Medical Trend Rates	9.00%
-	Ultimate Medical Trend Rate	5.00%
-	Year Ultimate Trend Rates Reached	2016
-	Actuarial Cost Method	Entry Age Normal
-	The remaining amortization period at 06/30/2013	24.47
-	Annual Payroll Increase	2.50%

### FINANCIAL STATEMENT DISCLOSURE

The GASB standard on accounting for postretirement benefits other than pensions requires the following disclosures in the financial statements with regard to the retiree benefit liability:

### A BRIEF DESCRIPTION OF THE RETIREE MEDICAL AND LIFE INSURANCE PLANS: 2.)

a.	Plan	Types:	
----	------	--------	--

### Medical

Insured through the West Suburban Health Group. Pre Medicare Options: Harvard Pilgrim PPO, Tufts Point of Service, Blue Option Rate Saver, Fallon Direct Rate Saver, Fallon Select Rate Saver, Harvard Pilgrim Rate Saver, Tufts Navigator Rate Saver.

Post Medicare Options: Medex III, HPHC Medicare Enhanced, Managed Blue for Seniors, Tufts Medicare Preferred HMO, Tufts Medicare Preferred Plus Plan, Fallon Senior Plan.

### Life Insurance

Insured through Boston Mutual

b. Eligibility:

Age 55 or older with 10 years of service or any age with at least 20 years

of service

Benefit/Cost Sharing:

The town covers 50% of the health and life insurance premium. The town contributes the corresponding percentages shown below for Medicare supplement plans. This decrease in percentage accounts for the Medicare part B reimbursement. After July 1, 2011 all employees are required to go into

rate saver plans and the town covers 90% of medical premiums.

d. Spouse Benefit:

The town covers 50% of the spouse's medical premium and 80% of

rate saver family plans.

e. Surviving Spouse Benefit:

Yes. The town covers 50% of the surviving spouse's medical premium.

### FINANCIAL STATEMENT DISCLOSURE (cont.)

### f. Annual Medical Premiums:

### Effective July 1, 2012:

Non-Medicare Plans:	<u>Individual</u>	<b>Family</b>
Blue Option Rate Saver	\$7,236.00	\$19,440.00
Fallon Direct Rate Saver	\$5,820.00	\$15,660.00
Fallon Select Rate Saver	\$6,252.00	\$16,848.00
Harvard Pilgrim Rate Saver	\$7,032.00	\$18,348.00
Tufts Navigator Rate Saver	\$7,440.00	\$19,476.00
Harvard Pilgrim PPO	\$18,744.00	\$41,628.00
Tufts POS	\$18,744.00	\$41,628.00

### Effective January 1, 2013:

Medicare Plans:	Per Person Covered	Retiree Contribution
Medex III	\$5,088.00	38.22%
HPHC Medicare Enhance	\$4,536.00	36.79%
Tufts Medicare Preferred Plus	\$3,984.00	34.24%
Tufts Preferred HMO	\$2,880.00	27.90%
Managed Blue for Seniors	\$4,824.00	37.57%
Fallon Senior Plan	\$3,348.00	31.29%

g. Annual Life Insurance
Premium

\$4.20 per \$5,000 of life insurance per annum

### **Section IV**

### **Actuarial Assumptions And Methodology**

The following pages detail the assumptions used in the calculations.

### **ACTUARIAL ASSUMPTIONS AND METHODOLOGY**

1. Funding Interest Rate: An interest rate of 4.00% was used.

### 2. Mortality:

For healthy participants: the mortality rates are from the RP-2000 Combined mortality table projected fully generationally with projection scale AA.

For disabled participants: the mortality rates are from the RP-2000 Combined mortality table set forward 3 years for males.

### 3. Retirement Rates:

Group 1		
<u>Age</u>	<u>Male</u>	<u>Female</u>
45	0%	0%
50	1.5%	3.0%
55	4.0%	5.0%
60	8.0%	8.0%
65	25.0%	25.0%
70+	100.0%	100.0%

### Group 4

Age	<u>Unisex</u>
45	4.0%
50	5.0%
55	25.0%
60	20.0%
65	65.0%
70+	100.0%

### Teachers-Males/ Females

<u>Age</u>	<u>&lt;20</u>	<u> 20-29</u>	<u> 30+</u>
55	3.0% / 2.0%	3.0% / 3.0%	6.0% / 6.0%
60	15.0% / 20.0%	20.0% / 16.0%	50.0% / 35.0%
62	20.0% / 25.0%	30.0% / 30.0%	40.0% / 35.0%
65	40.0% / 30.0%	40.0% / 30.0%	50.0% / 35.0%
70	100.0% / 100.0%	100.0% / 100.0%	100.0%/ 100.0%

### 4. **Disability Rates:**

Group 4	
<u>Age</u>	<u>Unisex</u>
20	.410%
30	.504%
40	.608%
50	.712%
60+	.780%

### **ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)**

### 5. **Termination Rates:**

Group 1			
	Years of Service		
<u>Age</u>	0	5	10+
20	27.0%	12.0%	7.0%
30	23.0%	10.0%	5.5%
40	16.0%	8.0%	4.0%
50	14.0%	6.0%	3.0%

### Group 4

Years of Service	<u>Rate</u>
0	8.0%
5	4.5%
10	3.0%
15	2.5%
20+	4.0%

### Teachers-Males/ Females

		Years of Service	
<u>Age</u>	<u>0</u>	<u>5</u>	<u>10+</u>
20	12.0% / 10.0%	4.5% / 9.0%	1.0% / 5.0%
30	11.4% / 12.0%	4.5% / 9.0%	1.0% / 5.0%
40	9.7% / 11.0%	5.4% / 6.5%	1.7% / 2.9%
50	10.0% / 8.2%	4.8% / 4.2%	2.2% / 2.1%

6.

Health Care Trend Rates: It was assumed that health care costs would increase in accordance with the trend rates in the following table:

	Medical
<u>Year</u>	Rates
2012	9.0%
2013	8.0%
2014	7.0%
2015	6.0%
2016+	5.0%

**Participation Rate:** 7.

It is assumed that 90% current active employees will enroll in retiree medical and life insurance coverage.

### **ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)**

8. Percent Married:

It was assumed that 65% of the male and 40% of the female employees who elect retiree health care coverage for themselves would also elect coverage for their spouse upon retirement. It was assumed that male spouses are three years older than their wives and female spouses are three years younger than the retiree. For current retirees, actual census information was used.

- 9. Actuarial Value of Assets: N/A
- 10. Per Capita Claims Cost:

Per Capita Claim Costs were developed by applying morbidity aging factors to the average premium rates reflecting the demographic characteristics of the insured group. Below are sample annual per capita claim costs used:

<u>Age</u>	<u>Male</u>	<u>Female</u>
40	4,560	6,384
45	5,411	6,793
50	6,496	7,494
55	7,888	8,185
60	9,513	9,119
65	3,742	3,504
70	4,133	3,872
75	4,563	4,275
80	4,797	4,491

- 11. <u>Administrative expenses:</u> Included in premiums used.
- 12. Participant Salary

Increases: 3.50% annually

- **13.** Payroll Growth Rate: 2.50% annually
- 14. <u>High Cost Plan Excise</u> Tax:

Effective in 2018. The law apply a 40% tax to the cost of plan benefits in excess of statutory thresholds, which are \$10,200 for single coverage and \$27,500 for family coverage for Medicare eligible retirees, and \$11,850 for single coverage and \$30,950 for family coverage for retirees who are between ages 55 and 65. We assume the thresholds will start to increase in 2018 at the rate of 3.4%. The plan costs for pre 65 and post 65 benefits are based on the plans' premium costs adjusted for aging and trended at the health care trend rates shown above.

### ACTUARIAL ASSUMPTIONS AND METHODOLOGY (cont.)

### **ACTUARIAL COST METHOD**

An Actuarial Cost Method develops an orderly allocation of the actuarial present value of benefits payments over the working lifetime of the participants in the plan. The actuarial present value of benefits allocated to a particular fiscal year is called the Normal Cost. The actuarial present value of benefits allocated to all periods prior to a valuation date is called the Actuarial Accrued Liability. The Unfunded Actuarial Accrued Liability is amortized over future years in accordance with the employer's established accounting policy.

The Entry Age Actuarial Cost Method is used in this valuation. Under this method, the Actuarial Present Value of Projected Benefits of each individual included in the Actuarial Valuation is allocated on a level basis over future earnings of the individual between entry age and assumed exit age(s). The portion of this Actuarial Present Value allocated to a valuation year is called the Normal Cost. The portion of this Actuarial Present Value not provided for at a valuation date by the Actuarial Present Value of future Normal Costs is called the Actuarial Accrued Liability.

The amortization of the unfunded actuarial accrued liability may be determined in level dollar amounts or as a level percentage of projected payroll of active plan members. The total unfunded actuarial accrued liability may be amortized as one amount, or components of the total may be separately amortized. The equivalent single amortization period for all components combined may not exceed the maximum acceptable period of 30 years. The results in Sections I and III are based on a 30 year amortization of the unfunded actuarial accrued liability as a level percentage of payroll. The development of the Annual Required Contribution under alternative amortization methods is provided in Appendix II.

### **ADDITIONAL COMMENTS**

The values in this GASB 45 valuation represent a closed group and do not reflect new entrants after the census collection date.

May 13

### Section V

### **Appendices**

### APPENDIX - I.

### ACTIVE EMPLOYEE BY AGE AND SERVICE

### AS OF NOVEMBER 1, 2012

~		٠
Se	P* 17	100
~~		

Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	_25 - 29	30 - 34	35 - 39	40+	Total
0 - 19	0	0	0	0	0	0	0	0	0	0
20 - 24	22	2	0	0	0	0	0	0	0	24
25 - 29	103	15	1	0	0	0	0	0	0	119
30 - 34	81	58	4	0	0	0	0	0	0	143
35 - 39	31	41	15	4	0	0	0	0	0	91
40 - 44	33	29	26	21	2	1	0	0	0	112
45 - 49	29	31	20	25	11	6	0	0	0	122
50 - 54	34	31	23	20	19	15	2	0	0	144
55 - 59	16	37	28	22	10	12	12	0	1	138
60 - 64	12	16	24	18	10	12	10	8	0	110
65 - 69	7	5	4	10	2	4	1	0	1	34
70 - 74	1	2	1	2	0	0	0	0	1	7
75 - 79	0	0	0	0	0	0	0	0	0	0
80 - 84	0	0	0	0	0	0	0	0	0	0
85 and Over	0	0	0	0	0	0	0	0	0	0
Total	369	267	146	122	54	50	25	8	3	1,044

### APPENDIX - II.

### **RECONCILIATION OF ACTUARIAL ACCRUED LIABILITY**

a.	7/1/2010 Actuarial Accrued Liability	\$119,187,237
b.	2010 Normal Cost	\$5,618,090
c.	Interest Rate	4.00%
d.	Interest on $(b. + c.)$	\$4,992,213
e.	2010 Expected Benefit Payments	(\$3,704,594)
f.	Interest on f.	(\$73,366)
g.	7/1/2011 Expected Actuarial Accrued Liability	\$126,019,580
	(a. + b. + d. + e. + f.)	
h.	2011 Normal Cost	\$5,758,542
i.	Interest Rate	4.00%
j.	Interest on (g. + h.)	\$5,271,125
k.	2011 Expected Benefit Payments	(\$3,808,433)
1.	Interest on I.	<u>(\$75,422)</u>
m.	7/1/2012 Expected Actuarial Accrued Liability	\$133,165,392
	(g. + h. + j. + k. + l.)	
n.	Change in Actuarial Accrued Liability due to	
	<ol> <li>Demographic and plan cost changes</li> </ol>	(\$17,934,565)
	ii. Change in Actuarial Assumptions	\$5,045,168
	iii. High Cost Plan Excise Tax	\$705,629
	iv. Plan Change	<u>\$0</u>
	v. Total	(\$12,183,768)
0.	7/1/2012 Actuarial Accrued Liability	\$120,981,624
	(m. + n. v.)	

### APPENDIX - III.

### **DEVELOPMENT OF AMORTIZATION PAYMENT**

A.	Prior Bases	
	1. Amortization Base Balance as of 7/1/2010	\$119,187,237
	2. 2010 Amortization Payment	(\$5,123,851)
	3. Interest	4.00%
	4. Interest on $(1) + (2)$	\$4,562,535
	5. Amortization Base Balance as of $7/1/2011(1) + (2) + (4)$	\$118,625,921
	6. 2011 Amortization Payment	(\$5,553,801)
	7. Interest	4.00%
	8. Interest on $(5) + (6)$	\$4,522,885
	9. Amortization Base Balance as of $7/1/2012(5) + (6) + (8)$	\$117,595,005
	10. Remaining Amortization Period	26.13
	11. Valuation Interest rate	4.00%
	12. Assumed payroll growth	2.50%
	13. 2012 Adjusted Amortization Amount	\$5,368,914
В.	New Amortization Base	
	1. Experience (Gain)/Loss	(\$17,934,565)
	2. Assumption Changes	\$5,045,168
	3. High Cost Plan Excise Tax	\$705,629
	4. Plan Change	\$0
	5. Loss due to Funding timing	\$15,570,387
	6. Total $(1) + (2) + (3) + (4) + (5)$	\$3,386,619
	7. Remaining Amortization Period	30
	8. Valuation Interest rate	4.00%
	9. Assumed payroll growth	2.50%
	10. Amortization Amount	\$138,263
C.	Combined Bases	
	1. Amortization Base Balance as of 7/1/2012 (A.9. + B.6.)	\$120,981,624
	2. 2012 Preliminary Total Amortization Amount (A.13. + B.10.)	\$5,507,177
	3. 2012 Minimum Total Amortization Amount (30 year)	\$4,939,208
	4. 2012 Total Amortization Amount (greater of 2. and 3.)	\$5,507,177

### APPENDIX - IV

Year	Amount	Accumulated	PROJEC Vear	CTED BENI	PROJECTED BENEFIT PAYMENTS  Vear Amount Accumulated	ENTS	Vear	<b>*</b>	Amount	<	Acommilated
2012		\$ 3.706.618	2047	\$11.839.076	307.851.856		2080	? ₩	2 082 501	d e	581 045 163
			2048	\$11,633,011		7	2083	•	759.872	• <del>•</del>	582 805 035
2014 \$		\$ 12,055,418	2049	\$11,236,572	\$ 330,721,439	. 6	2084		,470,563	· 69	584.275,598
2015 \$	\$ 4,620,052	\$ 16,675,470	2050	\$10,905,712	\$ 341,627,151		2085	_	,215,301	↔	585,490,899
	3 4,922,726	\$ 21,598,196	2051	\$10,651,038	\$ 352,278,189	6	2086	<del>⇔</del>	992,704	€	586,483,603
	5,161,801	\$ 26,759,997	2052	\$10,484,285	\$ 362,762,474	4	2087	<del>6</del>	801,357	↔	587,284,960
		\$ 32,156,370	2053	\$10,340,124	\$ 373,102,598	<b>&amp;</b>	2088	<del>\$</del>	639,457	↔	587,924,417
2019 \$		\$ 37,789,148	2054	\$10,213,112	\$ 383,315,710	C	2089	<del>\$</del>	504,580	64	588,428,997
2020 \$		\$ 43,699,719	2055	\$10,143,368	\$ 393,459,078	<b>∞</b>	2090	<del>∽</del>	393,322	8	588,822,319
2021 \$	6,209,577	\$ 49,909,296	2056	\$10,073,647	\$ 403,532,725	~	2091	<del>\$</del>	302,849	\$	589,125,168
2022 \$	6,565,980	\$ 56,475,276	2057	\$ 9,996,351	\$ 413,529,076	2	2002	↔	230,442	69	589,355,610
2023 \$	6,914,310	\$ 63,389,586	2058	\$ 9,921,278	\$ 423,450,354	4	2093	<del>∽</del>	173,156	4	589,528,766
2024 \$	7,209,635	\$ 70,599,221	2059	\$ 9,822,655	\$ 433,273,009	6	2094	<del>∽</del>	128,433	↔	589,657,199
2025 \$		\$ 78,107,813	2060	\$ 9,705,311	\$ 442,978,320	0	2095	<b>∽</b>	94,080	<del>69</del>	589,751,279
2026 \$	7,777,644	\$ 85,885,457	2061	\$ 9,569,630	\$ 452,547,950	0	2096	↔	67,955	↔	589,819,234
2027 \$	8,082,744	\$ 93,968,201	2062	\$ 9,409,286	\$ 461,957,236	2	2097	<del>\$</del>	48,398	↔	589,867,632
2028 \$	8,411,690	\$ 102,379,891	2063	\$ 9,224,758	\$ 471,181,994	<b>+</b>	2098	s S	33,995	€	589,901,627
\$ 6202	8,669,586	\$ 111,049,477	2064	\$ 9,015,756	\$ 480,197,750	0	2099	∽	23,530	∽	589,925,157
2030 \$	8,874,728	\$ 119,924,205	2065	\$ 8,781,089	\$ 488,978,839	•	2100	∻	16,045	↔	589,941,202
2031 \$	9,133,177		2066	\$ 8,519,326	\$ 497,498,165	2	2101	€9	10,768	€	589,951,970
2032 \$	9,428,600	\$ 138,485,982	2067	\$ 8,230,482	\$ 505,728,647	4	2102	<del>∽</del>	7,118	↔	589,959,088
2033 \$	9,667,366	\$ 148,153,348	2068	\$ 7,914,402	\$ 513,643,049	•	2103	<del>⇔</del>	4,641	€9	589,963,729
2034 \$	9,945,792	\$ 158,099,140	2069	\$ 7,570,815	\$ 521,213,864	•	2104	<del>∽</del>	2,970	89	589,966,699
2035 \$	10,242,811	\$ 168,341,951	2070	\$ 7,200,290	\$ 528,414,154		2105	<del>69</del>	1,854	↔	589,968,553
		\$ 178,821,333	2071	\$ 6,804,673	\$ 535,218,827	4	2106	<del>∽</del>	1,139	↔	589,969,695
2037 \$		\$ 189,517,628	2072	\$ 6,387,397	\$ 541,606,224		2107	<del>∽</del>	989	<b>⇔</b>	589,970,378
2038 \$	10,967,407	\$ 200,485,035	2073	\$ 5,951,352	\$ 547,557,576		2108	<del>⊗</del>	405	↔	589,970,783
2039 \$	11,289,100	\$ 211,774,135	2074	\$ 5,499,541	\$ 553,057,117		2109	<del>∽</del>	228	↔	589,971,011
2040 \$	11,584,006	\$ 223,358,141	2075	\$ 5,039,454	\$ 558,096,571		2110	€	122	↔	589,971,133
2041 \$	11,887,623		2076	\$ 4,577,600	\$ 562,674,171		2111	<del>\$</del>	65	↔	589,971,198
2042 \$	12,153,506	\$ 247,399,270	2077	\$ 4,118,889	\$ 566,793,060	_	2112	€9	32	€	589,971,230
2043 \$	12,231,649	\$ 259,630,919	2078	\$ 3,669,071	\$ 570,462,131		2113	<del>69</del>	1	€9	589,971,244
2044 \$	12,258,865		2079	\$ 3,235,517	\$ 573,697,648	•	2114	<b>↔</b>	9	↔	589,971,250
2045 \$	12,141,946	\$ 284,031,730	2080	\$ 2,824,328	\$ 576,521,976		2115	€4		<del>69</del>	589,971,251
2046 \$	11,981,050	\$ 296,012,780	2081	\$ 2,439,686	\$ 578,961,662		2116	<b>&amp;</b> A		<del>∽</del>	589,971,251

### APPENDIX - V GLOSSARY

**Actuarial Accrued Liability.** The portion, as determined by a particular Actuarial Cost Method, of the present value of benefits which is not provided for by future Normal Costs.

**Actuarial Cost Method.** A procedure for determining the Actuarial Present Value of Total Projected Benefits and for developing an actuarially equivalent allocation of such value to time periods, usually in the form of a Normal Cost and an Actuarial Accrued Liability.

**Actuarially Equivalent.** Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.

Actuarial Present Value of Total Projected Benefits. The present value, as of the valuation date, of the cost of future benefits to be paid to employees, retirees, and covered dependents, discounted to reflect the expected effects of the time value (present value) of money and the probabilities of payment. It is the amount that would have to be invested on the valuation date so that the amount invested plus investment earnings will provide sufficient assets to pay total projected benefits when due.

**Annual OPEB Cost.** The accrual-basis measure of the periodic cost of an employer's participation in a defined benefit OPEB Plan.

Annual Required Contributions of the Employer (ARC). The employer's periodic required contributions to a defined benefit OPEB plan, calculated in accordance with the parameters defined in GAS 45.

Investment Return Assumption (Discount Rate). The rate used to adjust a series of future benefit payments to reflect the time value of money.

**Healthcare Cost Trend Rate.** The rate of change in per capita health claims costs over time as a result of factors such as medical inflation, utilization of healthcare services and technological developments.

**Net OPEB Obligation.** The cumulative difference since the effective date of GAS 45 between the annual OPEB cost and the employer's contributions to the plan.

**Normal Cost.** The portion of the Actuarial Present Value of plan benefits which is allocated to a valuation year by the Actuarial Cost Method.

**OPEB.** Postemployment benefits other than pension benefits.

Pay-As-You-Go. The amount of the benefits paid out to plan participants during the year.

Per Capita Claims Cost. The current average annual cost of providing postretirement health care benefits per individual.

**Supplemental Cost.** The amount of the Annual Required Contribution attributable to the amortization of the unfunded Actuarial Accrued Liability.